

WHAT IS CLAIMED IS:

1. A motor damper arranged in a passage in a refrigerator
2 through which cold air flows, comprising:
 - 3 a frame constituting a part of said passage;
 - 4 a cold air gate formed at the center of said frame;
 - 5 a baffle, rotatably secured on a rotation shaft formed on said frame, for
6 opening and closing said cold air gate;
 - 7 a rotation mechanism for swinging said baffle between open and closed
8 positions of said cold air gate;
 - 9 said baffle being arranged to enclose a neighboring region by said frame
10 at the position it closes said cold air gate;
 - 11 said rotation mechanism including a motor arranged outside said frame
12 and in the vicinity of said rotation shaft of said baffle; and
 - 13 an output shaft of said motor being rotatably secured to said rotation
14 shaft of said baffle.
1. 2. A motor damper according to Claim 1, wherein said output shaft
2 of said motor is attached to said rotation shaft of said baffle via a decelerating gear.
1. 3. A motor damper according to Claim 2, wherein said baffle is
2 rotatable to the position at which said cold air gate completely opens.
1. 4. A motor damper according to Claim 3, wherein said baffle is
2 rotatable by about 90° from the closed position to the open position of said cold air
3 gate.

1 5. A motor damper according to Claim 1, wherein said motor is a
2 stepping motor.

1 6. A motor damper according to Claim 1, wherein a tip of said baffle
2 overlaps said frame when said baffle closes said cold air gate, and the tip of said baffle
3 is exposed outside said frame when said baffle opens said cold air gate.

1 7. A motor damper according to Claim 1, wherein said cold air gate
2 is arranged on said frame in such a way that the position which said baffle closes said
3 cold air gate is slanted with respect to said cold air flow.

1 8. A motor damper according to Claim 1, comprising two baffles
2 arranged in about the center of said passage in said frame.

1 9. A motor damper according to Claim 1, wherein said rotation
2 mechanism is comprised of a stepping motor, a pinion fit to an output shaft of said
3 stepping motor, a fan-like gear engaged with said pinion, and a shaft for
4 fitting one end to said fan-like gear and for engaging another end with said baffle.

1 10. A motor damper according to Claim 9, wherein one end of a
2 spring is attached to said baffle on the side of said cold air gate and another end of
3 said spring is attached to said frame.

1 11. A motor damper according to Claim 9, wherein said baffle is
2 engaged with said shaft in a manner so as to provide a certain space therebetween.

1 12. A motor damper according to Claim 9, wherein a magnet is

2 adhered to one end of said fan-like gear, and in the vicinity of said magnet, a sensor
for detecting an approach of said magnet is attached to said frame.

13. A motor damper according to Claim 12, wherein said sensor is a
2 Hall-effect integrated circuit.